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Don't rush to rehabilitate: A remark on Koeneman & Zeijlstra 2014

Caroline Heycock and John D. Sundquist

Abstract

Koenenman and Zeijlstra (2014) aim to rehabilitate the strong version of the Rich Agreement Hypothesis (RAH), according to which there is a bidirectional implication between “rich” agreement morphology in the verbal system and movement of the finite verb to a functional head above vP but below the C system (V-to-I). We show that one of the clearest empirical arguments raised in the literature against the strong RAH—the persistence of V-to-I in Early Modern Danish—is not addressed by any of the counterarguments raised by Koenenman and Zeijlstra and therefore still stands as evidence against the rehabilitated generalization and theory.

Keywords: verb-movement, diachronic syntax, V-to-I, agreement, Danish

1 Introduction

Koenenman and Zeijlstra (2014) aim to rehabilitate the strong version of the Rich Agreement Hypothesis (RAH), according to which there is a bidirectional implication between “rich” agreement morphology in the verbal system and movement of the finite verb to a functional head above vP but below the C system (V-to-I). K&Z claim to “demonstrate that all the empirical arguments provided hitherto with the aim of showing that the RAH is (at least partially) incorrect are at best incomplete and quite often just wrong.” In this short note we show that one of the clearest empirical arguments raised in the literature against the strong form of the RAH is not addressed by any of the counterarguments in K&Z and therefore still stands as evidence against the rehabilitated generalization and theory. The case in question is the persistence of V-to-I in Early Modern Danish for more than two centuries after the loss of all but number agreement in the verbal paradigm, as documented in Sundquist 2002, 2003.

2 The strong RAH and the loss of V-to-I in Mainland Scandinavian

As pointed out in Bobaljik 2002, the gross generalization that the standard Mainland Scandinavian languages have lost all agreement morphology in the finite verbal paradigm and have also lost V-

to-I seems to support the biconditional, strong form of the RAH; but the significant lag typically observed between loss of morphology and loss of V-to-I is actually highly problematic (Bobaljik 2002, pp. 141–142). K&Z themselves point out (p. 606) that the loss of V-to-I in Danish is particularly delayed; Sundquist (2002, 2003) shows that while by 1350 there was at most a singular/plural distinction encoded in the verbal morphology of Middle Danish, V-to-I is still evidenced robustly in the data for more than two centuries after that date. In texts from the first half of the 16th century—two hundred years after the morphology has become “poor” by the definition in K&Z—V-to-I appears at a rate of 42%. In fact even in the latest period covered in that study, the second half of the 17th century, it is still occurring at a rate of above 10% (Sundquist 2003, p. 242). For reference, Table 1 shows the frequency of V-to-I in subordinate clauses in Danish texts from between 1500 (already 150 years after the total loss of person marking in the verbal morphology) and 1700. Table 2 shows the same data, aggregated into four 50-year periods. These rates were calculated by extracting subordinate clauses (where V-to-I is not masked by the effect of Verb Second (V2), and inspecting those containing a clause-medial adverb or negation. In a sentence where V-to-I has taken place, the finite verb will precede the adverb/negation; in a sentence where it has not, the finite verb will follow. For details of the texts and methodology, see Sundquist 2002, 2003.

Text	Old Word Order (N)	Old Word Order (%)
<i>RD</i> (1505–1511)	5/14	36%
<i>Kirkl</i> (1536–1539)	5/34	15%
<i>Pall</i> (1543)	42/68	62%
<i>Trolle</i> (1558–1564)	23/73	32%
<i>Gøye</i> (1563–1566)	7/20	35%
<i>Krabbe</i> (1573)	5/13	38%
<i>Hemm</i> (1574)	5/17	29%
<i>Huitfeldt</i> (1603)	6/56	11%
<i>Christian</i> (1625)	7/50	14%
<i>Kirk2</i> (1561–1662)	2/29	7%
<i>Christina</i> (1674)	3/53	6%
<i>Monrad</i> (1689)	8/28	29%
Totals	118/455	26%

Table 1: Frequency of old word order in embedded clauses in Danish wrt negation and medial adverbs, from Sundquist 2002, 2003

K&Z are aware of this issue, but consider that “such time gaps are not at all problematic, how-

Text	Old Word Order (N)	Old Word Order (%)
Period 1: 1500–1550	52/116	45%
Period 2: 1550–1600	40/123	33%
Period 3: 1600–1650	13/106	12%
Period 4: 1650–1700	13/110	12%

Table 2: Frequency of old word order in embedded non-declarative clauses in Danish: 50 year periods

ever, since the input in those stages is still paradoxical, containing both input for a poor agreement paradigm and evidence for V-to-Arg movement.” (p. 606). The idea that the input is “paradoxical” actually already begs the question: what is the linguistic system of the speakers **providing** this input, since by hypothesis V-to-Arg movement is incompatible with a poor agreement paradigm? Let us make the simplifying assumption, however, of a generation of speakers who have lost the rich agreement system of the generation providing the input, which of course still exhibits V-to-I/Arg. K&Z argue that learners may reanalyze the input in a way that is compatible with the strong RAH—hence either the loss of agreement or the presence of V-to-I/Arg in the subsequent period is only apparent.

How do K&Z consider that these arguments could be applied to the case of Danish? They are not completely specific about this, but they do offer three possible types of reanalysis. The first is that some other grammatical element is reanalyzed as a relevant type of agreement, resulting in V-to-I/Arg being retained. This is the account proposed for the persistence of V-to-I in French: subject clitics are reanalysed as agreement markers, hence there is always evidence for ARG, and verb movement is retained. As there is no evidence that Danish ever had subject clitics, this cannot have been a reanalysis open to speakers of Early modern Danish, and of course in this case we want precisely to explain the gradual loss of verb movement. So we can set this possibility aside for the case in hand.

The second possibility for reanalysis that K&Z suggest for apparent V-to-I/Agr movement in a language with poor agreement morphology is the one that they argue has taken place in Faroese: V-to-I/Agr is reanalysed as V-to-C. That is, cases where the verb in an embedded clause precedes

negation are reanalysed as cases of embedded Verb Second (EV2).¹ This explanation for the persistence of V–Neg/Adv orders in Danish was however already ruled out in Sundquist 2002, 2003. A hallmark of EV2 in all the Scandinavian languages is that it is restricted to a subset of clause types; in particular, while it is possible in at least non-factive declaratives, it is excluded—or at best highly disfavored—in relative clauses, indirect questions, and most types of adverbial clauses (see Heycock et al. 2010, among many others, for discussion). In order to control for the possibility that the high position for the verb in his data was due to EV2 rather than V-to-I, Sundquist isolated the cases that did not occur in an embedded declarative (operationalized as a clause introduced by the complementizer *at* ‘that’). If the possibility of the V–Neg/Adv order in Early Modern Danish was due to EV2, there should be a significant drop in the rates of V–Neg/Adv orders in this data set, where EV2 is excluded. We reproduce this restricted set of data in Table 3; Table 4 shows the same data sorted into 50-year periods.

Text	Old Word Order (N)	Old Word Order (%)
<i>RD</i> (1505–1511)	2/6	33%
<i>Kirkl</i> (1536–1539)	3/16	19%
<i>Pall</i> (1543)	11/16	69%
<i>Trolle</i> (1558–1564)	4/15	27%
<i>Gøye</i> (1563–1566)	2/4	50%
<i>Krabbe</i> (1573)	1/2	50%
<i>Hemm</i> (1574)	0/3	0%
<i>Huitfeldt</i> (1603)	2/20	10%
<i>Christian</i> (1625)	4/25	16%
<i>Kirk2</i> (1561–1662)	1/15	7%
<i>Christina</i> (1674)	1/10	10%
<i>Monrad</i> (1689)	3/8	38%
Totals	34/151	23%

Table 3: Frequency of old word order in embedded non-declarative clauses in Danish

As was argued already in Sundquist 2002, 2003, while these data are less robust (since declarative clauses are the most common type of embedded clause), the frequency of the V–Neg/Adv order

¹It has to be acknowledged that the evidence for this reanalysis in Faroese is largely circumstantial, given the gap in the documentary evidence for Faroese between the medieval period and the late 18th century. While Faroese does appear to show a higher rate of EV2 than the mainland Scandinavian languages, and to allow it more freely in disfavoring contexts (Heycock et al. 2010), it is hard to know whether this is an instance of change (as proposed in K&Z) or conservatism, given that in this respect Faroese shows similar properties to Icelandic.

Text	Old Word Order (N)	Old Word Order (%)
Period 1: 1500–1550	16/38	42%
Period 2: 1550–1600	7/24	29%
Period 3: 1600–1650	6/45	13%
Period 4: 1650–1700	5/33	15%

Table 4: Frequency of old word order in embedded non-declarative clauses in Danish: 50 year periods

that they show in the different periods is no different to what is observed in the declaratives, as can be seen by comparing Tables 3 and 4 to the corresponding Tables 1 and 2. That is, the hypothesis that the V–Neg/Adv orders in the data from Early Modern Danish are the result of embedded V2 is not supported; the second type of reanalysis suggested by K&Z cannot have taken place in Danish.

The third and final type of reanalysis proposed in K&Z is that V–Adverb orders may be reinterpreted via a change in the position of sentential adverbs: these adverbs may be reanalysed by learners as attaching lower than the edge of vP. This is the account proposed in K&Z for the V–Adverb orders in Regional Northern Norwegian and Kronoby Swedish documented in Bentzen 2007, Wiklund et al. 2007. Crucially, in these varieties finite verbs can appear above sentence-medial adverbs in environments where V2 is excluded, but they cannot appear above negation:

(1) ReNN (cited from Wiklund et al. 2007)

- a. ... ettersom når studenta <sannsynligvis> leverte <sannsynligvis>
... as some students <probably> handed.in <probably>
oppgaven.
assignment.the
‘... as some students probably handed in the assignment.’
- b. ... ettersom når studenta <ikke> leverte <*ikke> oppgaven.
... as some students <not> handed.in <not> assignment.the
‘... as some students didn’t hand in the assignment.’

K&Z argue that there is nothing excluding the possibility for low attachment somewhere within the vP for even sentential adverbs like *sannsynligvis* ‘probably,’ as they can undergo (covert) Quantifier Raising in order to scope over vP. Citing Penka (2010), however, they argue that negation “is not quantificational in nature [...] and therefore must always be interpreted in its base position” (p. 586).

In order to take sentential scope, then, negation can attach no lower than the edge of the vP.

This type of reanalysis also cannot be used as an explanation for the persistence of the V–Neg/Adv word order in Danish, however, as the evidence shows that there was no such split in the positioning of sentential adverbs versus negation. The figures in Table 1 above do not distinguish between cases involving sentential adverbs such as *alltid* ‘always’ and cases involving negation, but it is possible to go back to the data and separate out these cases. About 80% of the examples cited in Table 1 (363/455) involve negation, in the remaining 20% of cases the position of the verb is diagnosed with respect to some sentence-medial adverb. Tables 5 and 6 display a breakdown of the data that includes only cases where negation is used as the diagnostic for the position of the verb.

Text	Old Word Order (N)	Old Word Order (%)
<i>RD</i> (1505–1511)	3/11	27%
<i>Kirkl</i> (1536–1539)	5/31	16%
<i>Pall</i> (1543)	42/63	67%
<i>Trolle</i> (1558–1564)	19/59	32%
<i>Gøye</i> (1563–1566)	7/20	35%
<i>Krabbe</i> (1573)	5/11	45%
<i>Hemm</i> (1574)	3/8	38%
<i>Huitfeldt</i> (1603)	5/41	12%
<i>Christian</i> (1625)	5/42	12%
<i>Kirk2</i> (1561–1662)	2/25	8%
<i>Christina</i> (1674)	1/40	3%
<i>Monrad</i> (1689)	4/12	33%
Totals	101/363	28%

Table 5: Frequency of old word order in negated embedded clauses in Danish

Text	Old Word Order (N)	Old Word Order (%)
Period 1: 1500–1550	51/105	49%
Period 2: 1550–1600	34/98	35%
Period 3: 1600–1650	10/83	12%
Period 4: 1650–1700	7/77	9%

Table 6: Frequency of old word order in negated embedded clauses in Danish: 50 year periods

As a comparison between these tables and the original data in Tables 1 and 2 demonstrates, the trend remains the same if we limit the analysis to examples with negation, which, by K&Z’s assumptions, is a reliable indicator for the left edge of vP. A two-sample t-test using the data in

Tables 1 and 5 indicates that there is no statistically significant difference between the two datasets ($t(22)=-0.1$, $p=0.9$).² This trend is even clearer when all texts from the 17th century are clustered together: the rate of V-to-I/Agr is 11% (17/160). K&Z are very clear about the predictions of the strong RAH with respect to negation: “if and only if a variety has a rich agreement paradigm is the finite verb able to cross the phrasal negative adverb that induces sentential negation in non-V2 environments” (587–588). The diachronic data from Danish provide clear counter-evidence to this claim and hence make K&Z’s final type of reanalysis untenable as an account of the grammar(s) of Danish in the 15th–17th centuries.

One final route to rescuing the rehabilitation of the Strong RAH that might be contemplated would be to invoke both reanalyses simultaneously. According to this hypothesis, finite verbs would be able to precede adverbs even in non-V2 contexts because of a reanalysis of the position of the adverbs to a low position within vP; in contexts where embedded V2 is not excluded the finite verb would be able to precede even negation by virtue of V-to-C. It should already be clear, however, that this scenario is unlikely, as it would predict that, overall, the proportion of V–Adv (possible in all clause types) to Adv–V orders would be higher than the proportion of V–Neg (possible only in EV2 contexts) to Neg–V orders. But we have already shown that this is not the case. We can also test this hypothesis directly, by considering the most restricted set of data—negated sentences in embedded non-declaratives. In such contexts, the RAH predicts that the verb will never precede negation. At this point the Ns become very small because so much of the data has been excluded, but the diachronic picture does not change, as shown in the final Table 7; the V–Neg order is still robustly attested at least as late as the end of the 16th century. Hence even the hypothesis that both reanalyses took place cannot account for the Danish data.

3 Conclusion

A close examination of the persistence of V–Adverb and V–Negation orders in Early Modern Danish shows that this phenomenon still stands as a counterexample to the predictions of the strong version

²Following Studebaker (1985) in using percentage frequencies for input in a t-test, we converted the percentages to Rationalized Arcsine Units (RAUs) to clean potential effects of skewness.

Text	Old Word Order (N)	Old Word Order (%)
Period 1: 1500–1550	12/33	37%
Period 2: 1550–1600	10/23	44%
Period 3: 1600–1650	4/37	11%
Period 4: 1650–1700	2/26	8%

Table 7: Frequency of old word order in negated nondeclarative embedded clauses in Danish: 50 year periods

of the Rich Agreement Hypothesis, as originally argued in Sundquist 2002, 2003. These orders show no sensitivity to clause type, and hence cannot be explained via an reanalysis as V-to-C (embedded Verb Second). There is also no difference in the frequency of the finite verb preceding sentential adverbs versus negation, hence a putative reanalysis in the position of sentential adverbs also cannot be invoked. At present, then, the best available analysis is that V-to-I persisted for more than two centuries, and multiple generations, after the loss of rich agreement in Danish. Of course, it was still lost eventually—see Heycock and Wallenberg 2013 for a recent attempt to explain both the loss and the fact that it was gradual rather than catastrophic. But the prediction that sets apart the strong Rich Agreement Hypothesis, that V-to-I is unlearnable in the absence of a specific morphological paradigm, is not supported by the best diachronic evidence.

References

- Bentzen, Kristine. 2007. Kronoby revisited: Verb movement in embedded non-V2 contexts in Northern Ostrobothnian. *Nordlyd (Tromsø Working Papers in Language and Linguistics)* 35.
- Bobaljik, Jonathan. 2002. Realizing Germanic inflection: Why morphology does not drive syntax. *Journal of Comparative Germanic Linguistics* 6:129–167.
- Heycock, Caroline, Antonella Sorace, and Zakaris Svabo Hansen. 2010. V-to-I and V2 in subordinate clauses: an investigation of Faroese in relation to Icelandic and Danish. *The Journal of Comparative Germanic Linguistics* 13:61–97.
- Heycock, Caroline, and Joel Wallenberg. 2013. How variational acquisition drives syntactic change:

- The loss of verb movement in Scandinavian. *Journal of Comparative Germanic Linguistics* 16:127–157.
- Koenenman, Olaf, and Hedde Zeijlstra. 2014. The Rich Agreement Hypothesis rehabilitated. *Linguistic Inquiry* 45:571–615.
- Penka, Doris. 2010. *Negative indefinites*. Oxford: Oxford University Press.
- Studebaker, Gerald A. 1985. A rationalized arcsine transform. *Journal of Speech, Language, and Hearing Research* 28:455–462.
- Sundquist, John D. 2002. Morphosyntactic change in the history of the mainland Scandinavian languages. Doctoral Dissertation, Indiana University.
- Sundquist, John D. 2003. The rich agreement hypothesis and Early Modern Danish embedded-clause word order. *Nordic Journal of Linguistics* 26:233–258.
- Wiklund, Anna-Lena, Gunnar Hrafn Hrafnbjargarson, Kristine Bentzen, and Þorbjörg Hróarsdóttir. 2007. Rethinking Scandinavian verb movement. *Journal of Comparative Germanic Linguistics* 10:203–233.

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